

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012761**Date Inspected:** 20-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

FCAW welding of weld joint NSTL4-3D/L-49, 53 located inside PCMK north tower, lift 4, skins B/C to corner angle plate between 127M and 131M double diaphragms. Welder was identified as 053869. ZPMC QC was identified as CWI Du Zhi Qun (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F-2 and WPS-B-T-2332-TC-P4-F-2, respectively.

Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Nan.

FCAW welding of weld joint NSTL4-3D/L-24, 20 located inside PCMK north tower, lift 4, skins C/D to corner angle plate between 127M and 131M double diaphragms. Welder was identified as 040533. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F-2 and WPS-B-T-2332-TC-P4-F-2, respectively. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Nan.

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Bay 11

This QA Inspector randomly observed no apparent welding related work being performed in Bay 11.

Heavy Dock

This QA Inspector randomly observed the following work in progress on the Heavy Dock:

FCAW welding of weld joint NSD1-SA76F/H-29 located outside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 057244. ZPMC QC was identified as ZPMC CWI Gong Liangzhu (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2333-TC-P4-F.

FCAW welding of weld joint NSD1-SA76F/H-57 located outside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 255455. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2333-TC-P4-F.

FCAW welding of weld joint NSD1-SA76F/H-3 located inside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 053869. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2333-TC-P4-F.

FCAW welding of weld joint NSD1-SA11-1 located inside PCMK north tower, lift 1 base, skin B, shear plate stiffener to connection plate. Welder was identified as 040533. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2333-TC-P4-F.

FCAW welding of weld joint ESD1-SA294F/G-55 located outside PCMK east tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 066155. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

FCAW welding of weld joint SSD1-SA17F/G-62 located outside PCMK south tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 054069. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

FCAW welding of weld joint SSD1-SA17F/G-48 located outside PCMK south tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 044480. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-2333-TC-P4-F.

ABF Representative Li Xiu Hua informed this QA Inspector that the only work being performed at the tower trial assembly area was at the base level at the above noted locations. The tower access elevator appeared to be shut off at the 23M level.

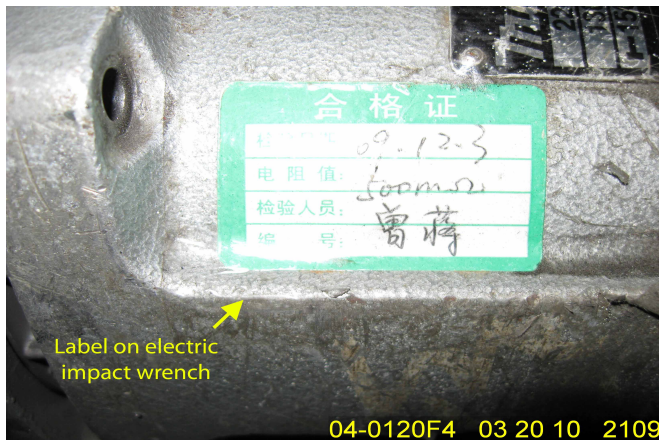
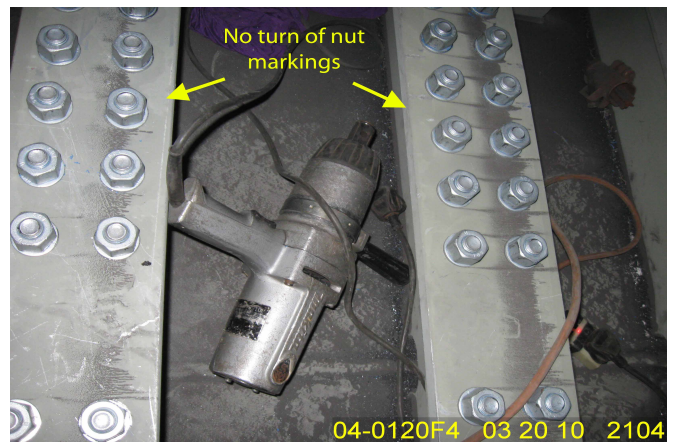
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OBG segments 5E, 5W, and CB4 were located on the ship moored to the end of the heavy dock and OBG segments CB5 and CB6 were located near the end of the heavy dock. No work was observed being performed on either OBG segments 5E, 5W, CB4, CB5, or CB6, although ZPMC workers were performing hot work on the stanchions alongside segments 5E and 5W.

OBG segment 6E was located near the end of the heavy dock. ZPMC workers were performing what appeared to be snug tightening using hand wrenches at the bottom plate in the FL3 area of segment 6BE near the interface with CB5. ZPMC workers were inside 6BE near the west side of panel point 41, using an electric impact wrench tightening bolt sets on the side plate to side plate connections. The bolt sets were observed to be not yet marked for turn of the nut verification. ZPMC Bolting Crew Foreman Rao Hai Chow informed this QA Inspector that the workers were using the impact wrench in a limited tightening manner so as to achieve a snug tight level only and that ABF Representative David Woo and Caltrans Structural Materials Representative Aaron Prchlik had observed the snug tightening with the electric impact wrench and approved the procedure. The electric impact wrench appeared to be rated at 500 NM. See photos below.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest, 150-0042-2360, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Dawson,Paul	QA Reviewer
